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09/978,601	10/16/2001	Brian R. Genge	16139/09015	5106

7590

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EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/978,601

Applicant(s)

GENGE ET AL.

Examiner

Paul Marcantoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 34-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-55 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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The following below represents the examiner's restriction of applicants' claims:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-33, drawn to a cement powder, classified in class 106, subclass 690.
- II. Claims 34-43, drawn to a method of making a cement powder, classified in class 423, subclass 299+.
- III. Claims 44-48, drawn to a method of binding/bonding articles together (e.g. bone and cement, classified in class 156, subclass 308+.
- IV. Claims 49-50, drawn to an article made of cement (e.g. bolts, nuts, washer, screw, splint, rod, sheet, cylinder), classified in class 411, subclass 378+.
- V. Claims 51-54, drawn to a method of storing calcium phosphate cement, classified in class 34, subclass 302+.
- VI. Claim 55, drawn to a reactive tri-calcium phosphate nanoparticles, classified in class 510, subclass 467+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the cement powder can be made by other materially different methods such as solid state synthesis, sol-gel, flame hydrolysis, etc.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the cement powder of Group I can be used in a process to make a building material, to make a coating, etc. Using the cement for binding is not the only use for cement.

Inventions I and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a building material such as a tile or building block as well as a coating or insulator for a wall or floor, a flooring material, sidewalk, road, etc. and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either

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instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and V, II and III, II and IV, II and V, III and IV, III and V, IV and V, and V and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, functions, and effects and are patentably distinct as shown by their mutually exclusive characteristics.

Inventions I and VI and IV and VI are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a detergent or cleaning composition (phosphates) and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions II and VI and III and VI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the tricalcium phosphate nanoparticles can be used in a process to make a detergent or a cleaner.

#### Response to Restriction with Traverse:

The applicants have elected Group I, claims 1-33 and traversed the restriction on the grounds that a serious burden has not been created for the examiner. In rebuttal, the serious burden that applicants allege has been met as shown by the proper reasons for restrictions provided above. It is also noted that applicants have not actually

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traversed any of the proper reasons for restriction provided above. Applicants have failed to explain why any of the proper reasons for restriction above are improper. It is the examiner's reason that this is evidently because they are proper.

The applicants then argue that a search (evidently a computer search) for all claims would not be unreasonably burdensome because the same key words such as tricalcium phosphate nanoparticles, cement, etc. would include other claims. An assumption about how a search is performed for multiple inventions (or inventions in the examiner's particular area of expertise) does not overcome the proper untraversed reasons for restriction above. Further, the applicants ignore the restriction showing that cements, chemical particles (tricalcium phosphate), articles, methods of storing, method of binding, and method of making cement are all in different classifications and are handled by different examiners throughout the Patent and Trademark Office. It would also not be beneficial to applicants for an examiner in one particular art area to further examine inventions outside his area of expertise. The search for Group I would certainly not require looking for the method nor an article so the position that the search for one group would necessarily include art related to all others is not the case because of the diverse classifications of the multiple inventions claimed by applicants for their instant invention. The requirement is still deemed proper and is therefore made FINAL.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-33 are rejected under 35 U.S.C. 102(a and b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ying et al. '591, Liu et al. '368, Chow et al. '867 or '893, Fulmer et al. '540, '493, '442, '742, or '667, or Ison et al. '496 or '399.

Ying et al. would appear to teach nanoparticles of tricalcium phosphate that can be used for cement thus anticipating the instant invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

The remaining references all would appear to teach the presence of tricalcium phosphate particles for a cementitious materials and anticipate the instant invention. Even though the references would not directly teach nanoparticle size ranges, control of particle size even to this range would appear to have been an obvious design choice for one of ordinary skill in the art because this technology was available at the time of applicants' invention. Ying et al. would appear to provide support for this assertion.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

The terms "and other ingredients" is indefinite because applicants do not particularly point out and distinctly claim the identity of these other materials. What are they? They should be in claim 1 to resolve this situation.

The term "cementous" would not appear to be a word. Cementitious would appear to be the word the applicants meant for their claims. Correction throughout the claims is advised.

The different chemical groups (ie Group IA) should be capitalized in claim 6.

The terms "capable of curing" would appear indefinite. Amendment to —that cures—would resolve this issue.

The terms "wherein the bioactive agent comprises a growth factor" would appear indefinite. Clarification is respectfully requested.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is (703)-308-1196. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (703) 308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

A handwritten signature in black ink, appearing to read "Paul Marcantoni".

Paul Marcantoni  
Primary Examiner  
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